

WHAT IS CLAIMED IS:

1. An apparatus for pulling a single crystal comprising
a chamber means,
a crucible located in the chamber means,
a heater for heating a material provided in the crucible so that the material is melt,
a radiation shield located in the chamber means so as to surround a region in which a single crystal is pulled, for regulating flow of inert gas introduced therein, wherein a seed crystal is immersed into the melt material to pull the single crystal,
the radiation shield being made of graphite base material coated with silicon carbide,
the radiation shield comprising a main shield body, a horizontal part, and a rising part,
the main shield body being located so as to surround the single crystal and being formed of a hollow pipe,
the horizontal part extending inward and substantially horizontally relative to a surface of the melt material from the main shield body and being formed of a ring shape,
wherein the rising part rises upward along the single crystal and is formed of a ring shape,
a first curvature formed between the main shield body and the horizontal part,
a second curvature formed between the horizontal part and the rising part, and
wherein each of the first curvature and the second curvature has an

inside corner with a curved surface.

2. An apparatus according to claim 1, wherein a mounting part extends outward from an upper end of the main shield body, the mounding part being formed of a ring shape, and wherein a third curvature with a curved surface is formed between the main shield body and the mounting part.
3. An apparatus according to claim 1, wherein each curved surface is formed of a circular arc or an elliptic arc in cross section, and wherein the curved surface has a radius of curvature of 5mm or more.
4. An apparatus according to any one of claims 1 to 3, wherein a heat insulating material with a ring shape is supported by the main shield body, the horizontal part, and the rising part.
5. An apparatus according to claim 4, wherein a cover is provided for covering the heat insulating material, the cover being constructed dividable into a plurality of rings having different heat conductivities.
6. An apparatus according to any one of claims 1 to 5, wherein the main shield body and the horizontal part are arranged substantially in an obtuse angle, and the horizontal part and the rising part are arranged substantially in a right angle.